

U.S.S.N. 09/760,046
Filed: January 12, 2001
PRELIMINARY AMENDMENT

Amendment

In the Specification

Please replace the paragraph on page 14, line 21 until page 15, line 8, with the following paragraph.

PI The nonsolvent, or extraction medium, is selected based upon its miscibility in the solvent. Thus, the solvent and nonsolvent are thought of as "pairs". The solubility parameter (δ (cal/cm^3)^{1/2}) is a useful indicator of the suitability of the solvent/nonsolvent pairs. The solubility parameter is an effective predictor of the miscibility of two solvents and, generally, higher values indicate a more hydrophilic liquid while lower values represent a more hydrophobic liquid (e.g., $\delta_{\text{water}}=23.4(\text{cal}/\text{cm}^3)^{1/2}$ whereas $\delta_{\text{hexane}}=7.3(\text{cal}/\text{cm}^3)^{1/2}$). Solvent/nonsolvent pairs are useful where $0 \text{ less than } \leq |\delta_{\text{solvent}} - \delta_{\text{nonsolvent}}| \leq \text{less than } 6(\text{cal}/\text{cm}^3)^{1/2}$. Although not wishing to be bound by any theory, an interpretation of this finding is that miscibility of the solvent and the nonsolvent is important for formation of precipitation nuclei which ultimately serve as foci for particle growth. If the polymer solution is totally immiscible in the nonsolvent, then solvent extraction does not occur and nanoparticles are not formed. An intermediate case would involve a solvent/nonsolvent pair with slight miscibility, in which the rate of solvent removal would not be quick enough to form discreet microparticles, resulting in aggregation of coalescence of the particles.